



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,933	04/16/2004	James Boner	US030180	9013

28159 7590 10/20/2006

PHILIPS MEDICAL SYSTEMS
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3003
22100 BOTHELL EVERETT HIGHWAY
BOTHELL, WA 98041-3003

EXAMINER

JAWORSKI, FRANCIS J

ART UNIT	PAPER NUMBER
----------	--------------

3768

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/825,933

Applicant(s)

BONER ET AL.

Examiner

Jaworski Francis J.

Art Unit

3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 9 - 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 6, 9 - 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 – 4, 6, 9-10, are again rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Shimizu et al (US4579122).

In an interpretation where the terms positional actuator ' were interpreted broadly to refer to a motor and its output drive members driven so as to effect a positional change on a driven member, Adams is here considered to fall short of anticipation

Art Unit: 3768

under an interpretation that a position actuator be more narrowly defined as being not merely a motor and mechanical output but being slaved to perform when actuated under a servo control. (Effectively the alternative arguments accept a distinction between a motor and a servomotor). Then it would have been obvious in view of Shimizu et al to 'close the loop' and transmit positioning signals between position detector 50 and motor driver 80 (see Fig. 3) such that 20 and 30 analogous to Adams's motor and shaft and drive gear are driven under a servo control, for the reason that one may then compensate for non-linearity in the motion-converting portion 30 to obtain a constant sweep velocity for the scan beam. Both references otherwise teach display of the scan results.

Additionally Shimizu et al teaches that alternative to bevel gearing in Adams, it would have been obvious to provide a crank member 34 with inward portion at 36 angled towards the rotational axis defined by 32 and including a pivot having pivotable member 42 and pivotable about 44, and having a coupling member 36, 38 such that the connecting member is rotatably received within the bearing of 34 and hingedly connected to 42, 44 at points 46, since these were known rotational to oscillatory transfer mechanism equivalents in the ultrasound scanning art. Adam otherwise teaches that cover 32 may be used to confine an internal volume containing acoustic couplant 34 which bathes the acoustic array 18 in order to couple the vibratory ultrasound pressure wave to the test subject.. The mechanism of Shimizu et al is such that first and second axes 32, 44 and non-orthogonal intersecting axis defined by 30, 36 are present and perform as claimed.+

Additionally Shimizu et al teaches that a magnetic position encoder is advantageously used e.g. for 22 of Adams since this provides easy governance of an angle increment counter, see col. 5 line 12 – col. 6 line 13 thereof.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Shimizu et al as applied to claim 1 above, and further in view of Mochizuki et al (US5152294), since whereas the former does not teach use of a curved linear array, it would have been obvious in view of 30 of the latter to provide such for 18 of Adam since this increases the sector width during scanning and permits 3D imaging buildup. In the alternative, Mochizuki et al further teaches in its Fig. 8 the servomotor control by 102 receiving positional signals from 44 and acting on the drive motor and mechanical linkages 26 to provide actuator function.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams alone or further in view of Shimizu et al as applied to claim 7 above, or Adams-in-view-of-Shimizu et al as applied against claim 10 above, and further in view of Schroeder et al (US4572200), since whereas the former are silent as to specifics of the motor portion of the actuators, it would have been obvious in view of the latter to incorporate a permanent field producing magnet onto the rotating motor shaft and a stationary armature 35-46 since this design was known to provide a small drive with a high coercive force which would be desirable in overcoming inertia during scanning. Additionally Schroeder et al teaches the obviousness of including a bladder or diaphragm 66 as discussed in col. 5 top portion thereof into an ultrasound mechanical scanner since this allows for thermal expansion of contents without leakage.


THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738.

FJJ:fjj

10122006


Francis J. Jaworski
Primary Examiner